



STG Design Build

SERVICE BROCHURE

# MEP Engineering & Design

Integrated mechanical, electrical, and plumbing systems engineered for performance, efficiency, and California Title 24 compliance.



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BUILDING SYSTEMS

# The Systems Behind Every Comfortable Building

MEP systems account for 40-60% of a building's construction cost and determine its long-term operating efficiency. Poor MEP design means uncomfortable spaces, high utility bills, failed inspections, and costly retrofits.

STG engineers integrated MEP solutions that perform efficiently from day one, comply with California's stringent Title 24 requirements, and reduce operating costs for decades.



## Who It's For

- ✓ Developers requiring Title 24 compliance
- ✓ Homeowners renovating HVAC, plumbing, or electrical systems
- ✓ Commercial tenants needing TI engineering
- ✓ Medical, restaurant, and specialty facilities

**400+**

PROJECTS

**T-24**

CERTIFIED

**M/E/P**

LICENSED ENGINEERS

## PERFORMANCE DELIVERED

# Engineering Outcomes That Protect Your Investment



## Title 24 Compliance

Full California energy code compliance including CF1R documentation and energy modeling.



## Energy Cost Reduction

High-efficiency systems, smart controls, and heat recovery that lower operating costs 20-40%.



## Occupant Comfort

Properly sized HVAC, adequate lighting, and reliable plumbing for comfortable, productive spaces.



## Clash-Free Installation

Coordinated M/E/P design eliminates field conflicts between mechanical, electrical, and plumbing systems.



## Permit-Ready Documents

Complete MEP plans, calculations, and Title 24 reports that building departments approve.



## Future-Ready Design

Systems designed with capacity for expansion, EV charging, solar PV, and evolving code requirements.



FULL MEP SCOPE

# Three Disciplines. One Coordinated Design.

## Mechanical (HVAC)

Heating, ventilation, and air conditioning design including load calculations, equipment selection, duct layouts, and control sequences engineered for California's climate zones and Title 24 energy requirements.

## Electrical

Power distribution, panel schedules, lighting design, and low-voltage systems. From service entrance sizing to circuit layouts, every element is engineered for safety, efficiency, and code compliance.

## Plumbing

Domestic water supply, sanitary drainage, gas piping, and specialty systems. Designs include fixture schedules, riser diagrams, and water heater sizing optimized for performance and water conservation.

## What We Deliver

- HVAC Plans & Duct Layouts

- Electrical Plans & Panel Schedules

- Plumbing Plans & Riser Diagrams

- Lighting Design & Controls

- Title 24 Energy Compliance (CF1R)

- Load Calculations & Equipment Sizing

- Coordination Drawings

- Engineer's Stamp & Signature



INTEGRATED APPROACH

# Coordinated From Design to Installation

- 1 Requirements Analysis**  
Assess building needs, occupancy loads, and performance targets.
- 2 System Design**  
Engineer mechanical, electrical, and plumbing systems in parallel.
- 3 Energy Compliance**  
Prepare Title 24 calculations, energy models, and CF1R documentation.
- 4 Coordination Review**  
Cross-check all MEP systems against architecture and structure for clash-free design.
- 5 Permit Documents**  
Deliver stamped MEP plans, specifications, and compliance reports.
- 6 Construction Support**  
Submittal reviews, RFI responses, and site verification during installation.



SYSTEMS IN ACTION

# MEP Engineering Across Project Types



**BATHROOM REMODEL**

**Gatedshed Drive, Huntington Beach**

Complete plumbing redesign with fixture relocations, water heater upgrade, and ventilation improvements.



**KITCHEN REMODEL**

**Bauer Rd, Anaheim**

Full MEP coordination for kitchen renovation including electrical panel upgrade, new plumbing runs, and HVAC modification.



**BATHROOM REMODEL**

**Sun Dial Dr, Tustin**

Integrated MEP design for luxury bathroom with radiant heating, LED lighting systems, and water-efficient fixtures.



**KITCHEN REMODEL**

**Topaz, Irvine**

Electrical system design with dedicated circuits, upgraded lighting, and ventilation for commercial-grade appliances.



THE STG DIFFERENCE

## Why STG for MEP Engineering

- **Licensed Engineers**  
Licensed Mechanical, Electrical, and Plumbing engineers with deep California experience.
- **Title 24 Expertise**  
Deep knowledge of California's complex energy codes streamlines compliance.
- **Integrated Design**  
MEP coordinated with architecture and structure for efficient, clash-free installations.
- **Construction Support**  
RFI responses, submittal reviews, and site observations throughout construction.
- **Energy Focus**  
Priority on efficiency to reduce operating costs and meet sustainability goals.



### Rober Khalil

Founder & CEO

Rober Khalil founded STG Design Build on a simple premise: buildings perform best when their systems are designed together, not in isolation. His integrated approach to MEP engineering ensures mechanical, electrical, and plumbing systems work as a coordinated whole - reducing installation conflicts, lowering operating costs, and delivering spaces that perform exactly as designed. With hands-on experience across architecture, engineering, and construction, Rober brings a builder's perspective to every MEP design decision.



# Engineer Better Building Performance

From Title 24 compliance to complete MEP design packages, our licensed engineers deliver systems that perform.

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